



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,486	03/01/2004	Eliyahou Harari	SNDK.304US1	1878
36257	7590	06/20/2005	EXAMINER	
PARSONS HSUE & DE RUNTZ LLP 655 MONTGOMERY STREET SUITE 1800 SAN FRANCISCO, CA 94111			NGUYEN, VIET Q	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,486

Applicant(s)

HARARI, ELIYAHOU

Examiner

Viet Q. Nguyen

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment filed on 3/1/2004.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 9-37 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Group 1, claims **9-14** are drawn to a non-volatile memory for programming and reading data comprising an array of charge storage elements, a plurality of control gate lines extending across the array in a manner that opposing sidewalls of individual charge storage elements are capacitively coupled with at least two of control gate lines, and a decoder and voltage supply connected to the control gate lines to couple controlled voltages to the charge storage elements capacitively therewith during program data thereto and reading data therefrom;

Group 2, claims **15-30** are drawn to a non-volatile memory cell array comprising a plurality of strings of series connected cells extending in a first direction across a substrate, the cells including charge storage elements, the array including control lines extending in a second direction across the strings and including control gates adjacent charge storage elements thereof, the first and second directions being orthogonal, wherein the control gates are positioned between adjacent storage elements of the strings in a manner to be capacitively coupled with sidewalls of the adjacent storage elements of the memory cell strings on opposite sides of the control gates;

Group 3, claims **31-36** are drawn to a method of forming an array of non-volatile cells comprising the steps of "forming a layer of conductive material across substrate

Art Unit: 2827

with a first layer of dielectric therebetween and a second layer of first type dielectric thereover", "removing portions of at least the conductive material and second layer of dielectric in strips having widths in a first direction...", "removing portions of second layer of dielectric through masking elements having dimensions in the second direction according to a minimum resolvable elements size...". "forming spacers of a second type of dielectric along the sidewalls of the islands of second layer of dielectric...", "removing the remaining portions of the second layer of dielectric from between the spacers, ...", and "thereafter removing portions of the layer of conductive material exposed in first and second set of gaps between the spacers, ...";

Group 4, claim 37 is drawn to a method of operating a memory cell array, wherein strings of a plurality of more than two non-volatile memory transistors are connectable in series to designated bit lines, comprising utilizing potentials on conductive gate elements positioned in capacitive coupling with the substrate in regions between the memory transistors to selectively provide a level of conductivity in the substrate along the strings through such regions.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Nguyen whose telephone number is (571) 272-1788. The examiner can normally be reached on 7am-6pm (EST).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on (571) 272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2827

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


V. Nguyen
6/15/2005

Viet Q Nguyen
Primary Examiner
Art Unit 2827

